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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR        | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|-----------------------------|---------------------|------------------|
| 09/683,342   | 12/17/2001  | Andrew James Stanford-Clark | GB320000079US1      | 4068             |
| 7590   | 06/29/2005  |                             | EXAMINER            |                  |
| David Aker Esq.<br>23 Southern Road<br>Hartsdale, NY 10530 |             |                             | DICUS, TAMRA        |                  |
|  |             |                             | ART UNIT            | PAPER NUMBER     |
|  |             |                             | 1774                |                  |

DATE MAILED: 06/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |                              |  |
|------------------------------|------------------------|------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b>          |  |
|                              | 09/683,342             | STANFORD-CLARK, ANDREW JAMES |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>              |  |
|                              | Tamra L. Dicus         | 1774                         |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 08 April 2005.
- 2a) This action is FINAL.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1,3-8,10-13,15-20,36-46 and 48-54 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1,3-8,10-13,15-20,36-46 and 48-54 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                    | Paper No(s)/Mail Date. _____.   |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____. | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|   | 6) <input type="checkbox"/> Other: _____.                                   |

## **DETAILED ACTION**

The Examiner acknowledges the cancellation of claims 2, 9, 14, 21-35, and 47. The claim objections and both 102 rejections over Prusik and Matsunami individually, are withdrawn due to Applicant's amendment. A new grounds below is necessitated by Applicant's amendment.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 (amended), 3, 13, 15-16, 18, 19, 20, 36, 40-46, 48, and 51-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,544,925 to Prusik et al. in view of USPN 5,660,925 to Cooley et al.

Prusik teaches an activatable time-temperature indicator system. Teaches within regions 37 (first image/zone/information) and 57 (second image/zone/identifier/information) thermochromic ink or dye indicia 53 includes identifying barcode 55 which activates upon temperature changes (changing implies time changing-instant claim 36) indicating a failed or unsafe product, or as in Figure 6, indicates a message 65 that warns the consumer of a dangerous product condition. See col. 8, lines 25-51. The indicator is used for perishable food products. See col. 3, lines 53-65, col. 4, lines 9-68, col. 6, lines 45-68, col. 7, lines 5-20, lines 50-68, and Example XII. Specifically at col. 6, line 50, the information in 37 or 57 may include a 3<sup>rd</sup> information like, the product's weight and price, along with a bar code (instant claim 20). These

citing provide the teachings of Prusik equate to the products as instantly claimed in 1-3, 13, 18, 19, 20, 36, 47, 48 and 51-55. See Figures 5 and 6. The system of Prusik includes the same materials as Applicant, thus it functions as a display medium. Further to the new limitation of the image providing a condition or information, this is not germane to patentability. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987). That the product may be suitable for eating or display to be indicative of a previous thermal condition {being able to} is not germane since it has been held that an element that is “being able to” perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. *In re Hutchinson*, 69 USPQ 138. Further, the thermal condition history of a product is also taught at col. 8, lines 30-37, as Prusik explains upon expiration of useful shelf life of a perishable product is displayed via the barcode being altered or obscured to register in computer systems as failed or unsafe. Prusik does not state *per se* the images are irreversible, however, because Prusik teaches they are of the same material, the irreversible property is inherently provided (claims 13, 52, and 54). Further, to the instant claims, it appears an irreversible change only happens when a display is within a temperature range, thus it is not a positive recitation.

Regarding instant claims 1 and 15-16, to the 1<sup>st</sup> and 2<sup>nd</sup> adjacent images or zones, overlapping, above or below, or next to, with a transparent medium between the 1<sup>st</sup> and 2<sup>nd</sup> images as required by the instant claims, Prusik does not teach, although Prusik does teach

adding transparent mediums over 1<sup>st</sup> and 2<sup>nd</sup> images. Prusik does not teach the various types of information as recited in instant claims 40-46.

Cooley teaches a tamper-indicating authenticating label that has a first (18) and second (20) image adjacent to each other, in overlapping zones and above and below placement, and a transparent layer intermediate another image (22), which may also serve as the second image. The images of Cooley may be of any desired pattern, bar codes, alpha-numeric characters, logo, or the like (encompasses internet addresses or an entry) at col. 7, lines 35-40 and 49-54.

Hence it would have been obvious to one of ordinary skill in the art to modify the time-temperature system of Prusik to further include any type of identifiers for the purpose of identification as taught by Cooley at col. 7, lines 35-44. Also it would have been obvious to one of ordinary skill in the art to modify the time-temperature system of Prusik to include a transparent material intermediate a first, second, and/or third image/zones or said variety of image/zone placements because Cooley teaches such placement provides a label with security at col. 7, lines 50-55, the multiple images for displaying in the respective zones are in overlapping arrangement as the images may be of any desired pattern to showcase more than one image (Figures 1 and 2 and col. 7, lines 23-68 of Cooley). Further, optimization of the image placement to provide an overlapping configuration or spacing requirements as recited is a result effective variable dependent upon the chosen design as Cooley teaches (col. 7, lines 23-40). It has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272.

Claims 4-8 and 36-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,544,925 to Prusik et al. in view of USPN 5,660,925 to Cooley et al. and further in view of USPN 6,161,725 to Dean.

Prusik and Cooley are relied upon above. The combination does not provide for the liquid crystals of instant claims 4-8.

Dean teaches fluent product dispenser with temperature indicating means. At col. 5, lines 20-25, markings may include text to indicate proper temperatures. At col. 5, lines 35-55, temperature indicators are made of liquid crystals that reflect red light and responds to ambient temperature. See Figures 2A to 2C having the words, "too cold" to indicate temperature changes.

It would have been obvious to one of ordinary skill in the art to modify the time-temperature indicator of the combination to include liquid crystals that reflect red light for either first or second image because Dean teaches using such crystals to effect the temperature and information display of a product in response to temperature changes as cited above.

The combination does not provide for the temperature information of claims 36-39.

Dean teaches fluent product dispenser with temperature indicating means. At col. 5, lines 20-25, markings may include text to indicate proper temperatures. At col. 5, lines 35-55, temperature indicators are made of liquid crystals that reflect red light and responds to ambient temperature. See Figures 2A to 2C having the words, "too cold" to indicate temperature changes.

It would have been obvious to one of ordinary skill in the art to modify the time-temperature indicator of Prusik to include liquid crystals that reflect red light for either first or

second image, also providing for any information type because Dean teaches using such crystals to effect the temperature and information display of a product in response to temperature changes as cited above.

Claims 1 (amended), 3-8, 10-12, and 15-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,219,625 to Matsunami et al. in view of USPN 5,660,925 to Cooley et al.

Matsunami teaches a thermochromic laminate member and toy using the same (temperature sensitive display medium). The laminate comprises a thin transparent film on a thermochromatic layer, which has two images/zones (patterns of a first colored state and a second colored state) at col. 1, lines 22-53 which may be attached/affixed to a doll. The temperature-sensitive material in the thermochromic layer may comprise liquid crystals at col. 1, lines 60-68. At col. 2, lines 25-30, the temperature ranges changes the thermochromatic material. See also col. 3, lines 1-15, lines 40-65, which describes the light reflected colored background and that the light is absorbed to emphasize the interference light in the background. Thermochromatic pigment (inclusive of dye) and epoxy (polymer) ink is used in Example 4 (addressing claims 10-12). To the new limitation of the image providing a condition, this is not germane to patentability. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987). See also col. 3, line 65-col. 4, line 5.

Regarding claim 15, the transparent layer 3 overlays the thermochromic layer 2 at col. 3, lines 44-48.

Regarding claims 1, 3, and 16-20, Matsunami does not teach the images are overlapping or can be a bar code or identifier nor a transparent material intermediate a first second and/or third image.

Cooley teaches a tamper-indicating authenticating label that has a first (18) and second (20) image adjacent to each other and a transparent layer intermediate another image (22), which may also serve as the second image. The first and second zones for displaying the images are in overlapping arrangement as Figures 1 and 2 of Cooley show. The images of Cooley may be of any desired pattern, bar codes, alpha-numeric characters, logo, or the like at col. 7, lines 35-40 and 49-54.

Hence it would have been obvious to one of ordinary skill in the art to modify the laminate of Matsunami to further include bar codes or identifiers for the purpose of identification as taught by Cooley at col. 7, lines 35-44. Also it would have been obvious to one of ordinary skill in the art to modify the laminate of Matsunami to include a transparent material intermediate a first, second, and/or third image or overlapping zones for displaying images because Cooley teaches such placement provides a label with security at col. 7, lines 50-55, the multiple images for displaying in the respective zones are in overlapping arrangement as the images may be of any desired pattern (Figures 1 and 2 and col. 7, lines 23-68 of Cooley) to showcase more than one image. Further, optimization of the image placement to provide an overlapping configuration or spacing requirements as recited is a result effective variable dependent upon the chosen design as Cooley teaches (col. 7, lines 23-40). It has been held that discovering an optimum value of a result effective variable involves only routine skill in the art.

*In re Boesch*, 617 F.2d 272. To the limitation of the image providing a condition, this is not

germane to patentability. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

Claims 49-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,544,925 to Prusik et al. in view of USPN 5,660,925 to Cooley et al. and further in view of in view of USPN 5,721,421 to VanDonkelaar.

Prusik and Cooley are relied upon claim 1 above. As aforementioned, the thermal condition history of a product is taught at col. 8, lines 30-37, as Prusik explains upon expiration of useful shelflife of a perishable product is displayed via the barcode being altered or obscured to register in computer systems (an apparatus for processing per instant claim 50) as failed or unsafe.

The combination does not teach a bar code reader (apparatus providing information on how to process the product per instant claim 49).

VanDonkelaar teaches an apparatus and method for verifying a shelf tag comprising both a bar code reader and computer. VanDonkelaar explains when a stock clerk wishes to verify a price appearing on a shelf tag, he uses his bar code reader to scan a bar code on one of the products in question. This generates a bar code sensing signal which is sent to the terminal unit. The microprocessor decodes the bar code sensing signal to create a corresponding binary code. This binary code is incorporated into a query which the terminal unit transmits to the base station for forwarding to the central computer. After the central computer receives the query, it checks a data base of pricing information and formulates a responsive message

containing the requested price. That message is sent to the base station and relayed to the terminal unit for presentation on a built-in visual display. See col. 1, lines 35-46. Further, at col. 3, lines 47-56, VanDonkellar explains this same system.

It would have been obvious to one of ordinary skill in the art to have modified the time-temperature indicator of the combination to include an apparatus that provides information and an apparatus that processes because VanDonkellar teaches two apparatuses such as a bar code reader and a computer that function in the same way applicant intends, thus benefiting the user such as a store clerk to understand how to shelf products (VanDonkellar col. 1, lines 35-46 and col. 3, lines 47-56).

#### *Response to Arguments*

Applicant's arguments have been fully considered but they are not persuasive.

Applicant has amended the claims to recite an overlapping structure of a first and second zone for displaying first and second images. However, this feature is shown by Cooley in Figures 1 and 2, and an obvious modification in combination with either Prusik or Matsunami. Applicant's arguments that Cooley does not show this feature is not convincing because Figures 1 and 2 explicitly illustrate overlapping zones for displaying images 22, 20, and 18.

Applicant argues that the cited prior art has not attempted to design the structure to yield an overlapping arrangement to save space. However, Applicant does not claim images that overlap, but zones that overlap. The cited combinations show this feature to display different patterns or images, further, that Applicant has found another reason for this feature is not a patentable feature as the prior art teaches the same materials and structure.

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Applicant alleges the Examiner has failed to give any weight to the nature of the information displayed. The Examiner does not agree because the invention of Prusik and Cooley essentially teaches the claimed invention including the temperature functionality. The Applicant further asserts the intended use case law is not pertinent to the issues. The Applicant has not persuasively argued because the same elements of the temperature indicator is taught, despite any difference of wording, the meaning is the same. The intention of the product is to function all the various ways Applicant claims (e.g. to provide information on how to process the product, cook, or freeze), which is met by the prior art. Applicant has not provided objective evidence to prove otherwise. Additionally, Prusik teaches registration of barcodes in a computer system (col. 8, lines 30-35), addressing further arguments over information to be processed like a digital computer.

Applicant argues claim 13 alleging its patentability over prior art because it describes thermal history, irreversibility, and a condition that might happen. Claim 13 is not patentable because Prusik teaches the same material, absent any evidence to the contrary, the material inherently performs in the same manner (indication if temperature changes).

Applicant argues claims 18, 51, and 53 to the intended nature of information to be displayed. However, the same elements are taught by the prior art, that the display is intended for something or to do something is expected, absent any evidence to the contrary. Applicant has failed to submit evidence to disprove the teachings of the prior art and thus the claims stand rejected. Instant claim 18 is not patentable because Prusik and Cooley teaches the same image and bar code identifiers.

Applicant argues that the prior art does not teach or suggest the approach of specifying one way in which thermal history of a product may be determined, pointing to claim 13. Again, the prior art teaches claim 13 because the same elements are provided in the same structure. Further, Prusik shows that the same elements function as Applicant's intent to displaying the thermal history of a product illustrated in the chart of Optical Density vs. Time in Figures 7 and 8 and as explained by Prusik at col. 6, lines 20-25 indicating the Figures show temperature on the rate of color formation. Indeed 0-5 hours is prior to the 6<sup>th</sup> hour in relation to temperature rates is considered thermal history. Further Applicant has not proven the combination would not work as intended.

Applicant argues with respect to claims 3 and 16-20 over Cooley because Cooley teaches a label and not a display medium. The Applicant has not persuasively argued because a label is a functional equivalent to a display medium. They are one in the same. Applicant argues Cooley is not concerned with further processing of a product. This argument is not persuasive because it is simply based on intended use. Applicant appears to not have considered that a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). Applicant argues claims 36-50 to a unique property having an image and reading a symbol so a product may be processed. Prusik explains a unique property such as the medium which activates upon temperature changes (changing implies time

changing-instant claim 36) indicating a failed or unsafe product, or as in Figure 6, indicates a message 65 that warns the consumer of a dangerous product condition (product processing). See col. 8, lines 25-51. Applicant argues a symbol may be read, but Applicant does not claim a symbol.

Matsunami is still provided because Matsunami provides the same materials and structure of Applicant. Matsunami provides a thermochromatic laminate. Dean is still used in the rejection as Dean teaches fluent product dispenser with temperature indicating means. At col. 5, lines 20-25, markings may include text to indicate proper temperatures. At col. 5, lines 35-55, temperature indicators are made of liquid crystals that reflect red light and responds to ambient temperature. See Figures 2A to 2C having the words, “too cold” to indicate temperature changes. At col. 2, lines 25-30, the temperature ranges changes the thermochromatic material. Rejections over amended claims are moot in view of the rejections above.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

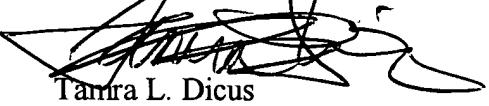
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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tamra L. Dicus whose telephone number is 571-272-1519. The examiner can normally be reached on Monday-Friday, 7:00-4:30 p.m., alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Tamra L. Dicus  
Examiner  
Art Unit 1774

June 20, 2005

  
RENA DYE  
SUPERVISORY PATENT EXAMINER  
A-U-1774 4/23/07